

CLAIMS

1. A method for producing a refractory composite material including the steps of infiltration of a porous carbide work-piece by a metal resulting in preparation of an intermediate body, **characterized in** that the intermediate body is additionally
5 treated in a melt of another metal at temperature exceeding the melting point of the metallic phase of the intermediate body.
2. A method according to claim 1, **characterized in** that the intermediate body is
10 treated in a melt so that the metal from the melt is uniformly distributed in the refractory composite material.
3. A method according to claim 1, **characterized in** that the intermediate body is
15 treated in a melt so that the metal from the melt is nonuniformly distributed in the refractory composite material.
4. A method according to any of claims 1-3, **characterized in** that as said porous carbide work-piece a work-piece is used prepared by pressing and sintering from
20 carbide powders.
5. A method according to any of claims 1-3, **characterized in** that a porous carbide work-piece is produced by pressing of powders of carbide forming elements or their mixtures, with subsequent treatment in a medium of hydrocarbons at a temperature exceeding their decomposition temperature and heat treatment at temperature 1200-
25 1800°C.
6. A method according to any of claims 1-5, **characterized in** that a porous work-piece is used with porosity 30-60 % vol.

7. A method according to any of claims 1-6, **characterized in** that a porous work-piece is used with a porosity uniformly distributed in volume

5 8. A method according to any of claims 1-6, **characterized in** that a porous carbide work-piece is used with a porosity non-uniformly distributed in volume.

9. A method according to any of claims 1-8, **characterized in** that said porous carbide work-piece is infiltrated by dipping in a melt of metal or melting of a weighed sample of metal on its surface.

10

10. A method according to any of claims 1-9, **characterized in** that before treatment the intermediate body is heated up to a temperature exceeding the melting point of a metal phase of the intermediate body.